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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,545	09/28/2000	Philippe Damon	RAL920000036US1	1166

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EXAMINER
CAO, DIEM K

ART UNIT	PAPER NUMBER
2126	5

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/675,545	DAMON ET AL.
	Examiner	**Art Unit**	
	Diem K Cao	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 September 2000_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-34_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5,7,10,15,19-21,23,26 and 31_ is/are rejected.

7)☒ Claim(s) _6,8,9,11-14,16-18,22,24,25,27-30 and 32-34_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

1. This Office Action is in response to the Application filed on 9/28/2000.

2. Claims 1-34 are presented for examination.

Drawings

3. The drawings filed on 9/28/2000 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office Action. The correction will not be held in abeyance.

Allowable Subject Matter

4. Claims 6,8,9,11-14,16-18,22,24,25,27-30 and 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-5,7,10,15,19-21,23,26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) in view of Russell (U.S. 6,349,388 B1) further in view of Dorn et al. (U.S. 6,012,081).

As to claim 1, APA teaches (page 2) an application program interface (timer management program) providing a set of synchronous functions allowing an application to

functionally operate a timer (managing a plurality of timers ... data processing system), a timer expires (timer expires).

However, APA does not explicitly teach a timer database for storing timer-related information, and a timer services for detecting the expiring of the timer, a handler function of the timer services allows the application to act on an expired timer without incurring an illegal time-out message.

Russell teaches (col. 4, line 33 – col. 5, line 47) a timer management system (timer processing engine 200), a data structure for storing timer-related information (timer data structures 204), and a timer services for detecting the expiring of the timer (a comparator 208, a timer state machine 206). Although Russell does not teach a database to store timer related information, Russell suggests a data structure could be a table (table or linked list of tables; col. 6, lines 20-38). It would have been obvious to apply the teaching of Russell to the system of APA because it provides a scalable approach to supporting an arbitrarily number of timers and reduces the typical processor overhead and hardware overhead involved in managing timers (col. 2, lines 27-31).

Dorn teaches hooks could be invoked before the timer callback is activated and after the timer callback has returned when the timer expires (timer expires, hooks; col. 13, line 55 – col. 15, line12). It would have been obvious to apply the teaching of Dorn to the system of APA because it provides a method to modify the behavior of an application.

As to claim 2, APA does not explicitly teach creating the timer from an allocated block of system memory, activating the timer, and reinitializing the timer using the allocated block of system memory. Dorn teaches creating the timer from an allocated block of system memory

(timer slot; col. 8, lines 41 - 64), activating the timer (a timer will be instantiated; col. 13, lines 55 – col. 15, line 12). However, Dorn does not explicitly teach reinitializing the timer using the allocated block of system memory. Dorn teaches the slot is reusable. It would have been obvious to apply the teaching of Dorn to the system of APA because it provides the programmers not to bother with the low level details.

As to claim 3, APA teaches (page 2, lines 10-19) when the timer expires (timer expires), the timer management system sends synchronously a time-out message to the application (the application is notified ... timer message).

However, APA does not explicitly teach creating the timer from an allocated block of system memory, activating the timer, wherein the time-out message is sent using the allocated block of system memory. Dorn teaches creating the timer from an allocated block of system memory (timer slot; col. 8, lines 41 - 64), activating the timer (a timer will be instantiated; col. 13, lines 55 – col. 15, line 12). However, Dorn does not explicitly teach the time-out message is sent using the allocated block of system memory. Dorn teaches the time-out message is sent to an internal queue (the expiration event ... internally; col. 14, lines 35-39). It would have been obvious to apply the teaching of Dorn to the system of APA because it provides the programmers not to bother with the low level details.

As to claim 4, APA teaches (page 2, lines 1 – 19) when the timer expires (timer expires) and the timer management program sends a time-out message to a particular queue (the time message ... on queue ... application), wherein the timer is in expired state in an asynchronous state machine (timer expires, asynchronous system). However, APA does not teach creating the timer from an allocated block of system memory, activating the timer. Dorn teaches creating the

timer from an allocated block of system memory (timer slot; col. 8, lines 41 - 64), activating the

timer (a timer will be instantiated; col. 13, lines 55 – col. 15, line 12). It would have been

obvious to apply the teaching of Dorn to the system of APA because it provides the programmers

not to bother with the low level details.

     As to claim 5, APA does not explicitly teach the particular queue is a system queue

attached to the application. Dorn teaches the expiration events are queued internally (col. 14,

lines 35-39). It would have been obvious to modify the queue in the system of Dorn to attach to

the application in the system of APA because it serves the same purpose.

     As to claim 7, APA teaches the application stops the timer, wherein the timer is in an idle

state in the asynchronous state machine with the time-out message being queued (In an

asynchronous system ... idle state; page 2, lines 10-19).

     As to claim 10, APA does not explicitly teach the timer is activated by the application,

wherein the timer is in a running state in the asynchronous state machine with the time-out

message being queued. However, APA teaches the application stop the timer while the time-out

message being queued. It would have been obvious to one of ordinary skill in the art, the

application could continue send the activate request to the timer while the time-out message

being queue.

     As to claim 15, see rejection of claim 10 above.

     As to claim 19, APA does not explicitly teach the API is a DLL file. It would have been

obvious to one of ordinary skill in the art to implement the API as a DLL because the DLL could

be used in any number of systems.

     As to claim 20, see rejections of claims 1 and 4 above.

As to claim 21, see rejection of claim 5 above.

As to claim 23, see rejection of claim 7 above.

As to claim 26, see rejection of claim 10 above.

As to claim 31, see rejection of claim 15 above.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

- George et al. (U.S. 5,768,572) teaches "Timer state control optimized for frequent

cancel and reset operations".

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Diem K. Cao whose telephone number is (703) 305-5220. The

examiner can normally be reached on Monday - Friday, 9:00AM - 5:00PM.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, DC 20231

Or fax to:
- AFTER-FINAL faxes must be signed and sent to (703) 746-7238.
- OFFICIAL faxes must be signed and sent to (703) 746-7239.
- NON-OFFICIAL/DRAFT faxes should not be signed, please send to (703) 746-7140.

Diem Cao
April 2, 2003